

GenCore version 4.5
Copyright (c) 1993 - 2000 CompuGen Ltd.

OM nucleic - nucleic search, using sw model

Run on: March 2, 2002, 20:28:56 ; Search time 2699.18 Seconds
(Without alignments)
2649.239 Million cell updates/sec

Title: US-09-540-235-1
Perfect score: 408
Sequence: 1 acgcgcgtgatgagaatta.....acatccatcatgtgttta 408

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 17159718 seqs, 8763200856 residues

Total number of hits satisfying chosen parameters: 34319436

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 45 summaries

Database :

Pending_Patents_NA_Main:*
1: /cgn2_6/ptodata/1/pna/US06.COMB.seq:*
2: /cgn2_6/ptodata/1/pna/US06.COMB.seq:*
3: /cgn2_6/ptodata/1/pna/US07.COMB.seq:*
4: /cgn2_6/ptodata/1/pna/US08.COMB.seq:*
5: /cgn2_6/ptodata/1/pna/US081.COMB.seq:*
6: /cgn2_6/ptodata/1/pna/US082.COMB.seq:*
7: /cgn2_6/ptodata/1/pna/US083.COMB.seq:*
8: /cgn2_6/ptodata/1/pna/US084.COMB.seq:*
9: /cgn2_6/ptodata/1/pna/US085.COMB.seq:*
10: /cgn2_6/ptodata/1/pna/US086.COMB.seq:*
11: /cgn2_6/ptodata/1/pna/US087.COMB.seq:*
12: /cgn2_6/ptodata/1/pna/US088.COMB.seq:*
13: /cgn2_6/ptodata/1/pna/US089.COMB.seq:*
14: /cgn2_6/ptodata/1/pna/US090.COMB.seq:*
15: /cgn2_6/ptodata/1/pna/US091.COMB.seq:*
16: /cgn2_6/ptodata/1/pna/US092.COMB.seq:*
17: /cgn2_6/ptodata/1/pna/US093.COMB.seq:*
18: /cgn2_6/ptodata/1/pna/US094.COMB.seq:*
19: /cgn2_6/ptodata/1/pna/US095.COMB.seq:*
20: /cgn2_6/ptodata/1/pna/US095A.COMB.seq:*
21: /cgn2_6/ptodata/1/pna/US095B.COMB.seq:*
22: /cgn2_6/ptodata/1/pna/US095C.COMB.seq:*
23: /cgn2_6/ptodata/1/pna/US095D.COMB.seq:*
24: /cgn2_6/ptodata/1/pna/US095E.COMB.seq:*
25: /cgn2_6/ptodata/1/pna/US095F.COMB.seq:*
26: /cgn2_6/ptodata/1/pna/US095G.COMB.seq:*
27: /cgn2_6/ptodata/1/pna/US095H.COMB.seq:*
28: /cgn2_6/ptodata/1/pna/US095I.COMB.seq:*
29: /cgn2_6/ptodata/1/pna/US095J.COMB.seq:*
30: /cgn2_6/ptodata/1/pna/US095K.COMB.seq:*
31: /cgn2_6/ptodata/1/pna/US095L.COMB.seq:*
32: /cgn2_6/ptodata/1/pna/US095M.COMB.seq:*
33: /cgn2_6/ptodata/1/pna/US095N.COMB.seq:*
34: /cgn2_6/ptodata/1/pna/US095O.COMB.seq:*
35: /cgn2_6/ptodata/1/pna/US095P.COMB.seq:*
36: /cgn2_6/ptodata/1/pna/US095Q.COMB.seq:*
37: /cgn2_6/ptodata/1/pna/US095R.COMB.seq:*
38: /cgn2_6/ptodata/1/pna/US095S.COMB.seq:*
39: /cgn2_6/ptodata/1/pna/US095T.COMB.seq:*
40: /cgn2_6/ptodata/1/pna/US095U.COMB.seq:*
41: /cgn2_6/ptodata/1/pna/US095V.COMB.seq:*
42: /cgn2_6/ptodata/1/pna/US095W.COMB.seq:*
43: /cgn2_6/ptodata/1/pna/US095X.COMB.seq:*

SUMMARIES

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Result No.	Score	Query Match	Length	DB ID	Description
1	408	100.0	408	21	US-09-540-235-1
2	408	100.0	408	45	US-60-128-439-2
3	302.4	74.1	384	45	US-60-128-439-1188
4	302.4	74.1	417	21	US-09-540-235-5042
5	235.2	57.6	298	45	US-60-128-439-1189
6	235.2	57.6	327	21	US-09-540-235-5043
7	133.2	32.6	562	30	US-09-770-152-388
8	132.8	32.5	371	23	US-09-605-701-18273
9	132.8	32.5	384	18	US-09-411-999-36936
10	132.8	32.5	394	23	US-09-605-701-5338
11	132.8	32.5	429	23	US-09-605-699-11618
12	132.8	32.5	471	23	US-09-605-701-4652
13	132.8	32.5	497	23	US-09-606-755-8558
14	132.8	32.5	543	18	US-09-411-999-32416
15	132.8	32.5	555	23	US-09-605-701-17385
16	132.8	32.5	595	58	US-60-253-457-24434
17	132.8	32.5	946	31	US-09-687-716-19329
18	130	31.9	417	27	US-09-684-016-150388
19	130	31.9	417	27	US-09-684-016-150388
20	130	31.9	449	23	US-09-605-701-17346
21	130	31.9	639	22	US-09-565-309A-56964
22	130	31.9	666	58	US-60-253-378-29237
23	130	31.9	724	25	US-09-654-617-127760
24	130	31.9	724	27	US-09-684-016-127760
25	130	31.9	51860	20	US-09-534-859-980
26	130	31.9	51860	31	US-09-803-736-980
27	129.8	31.8	423	18	US-09-411-999-31113
28	129.4	31.7	385	29	US-09-724-570-32325
29	129.4	31.7	385	29	US-09-724-570-32325
30	129	31.6	381	22	US-09-605-701-44416
31	129	31.6	639	22	US-09-565-309A-49589
32	126	30.9	668	28	US-09-705-326-2386
33	124.2	30.4	370	27	US-09-654-617-165153
34	124.2	30.4	370	27	US-09-684-016-165153
35	124.2	30.4	432	25	US-09-654-617-165221
36	124.2	30.4	432	27	US-09-684-016-165221
37	124.2	30.4	469	25	US-09-654-617-153103
38	124.2	30.4	469	25	US-09-684-016-153103
39	124.2	30.4	473	27	US-09-654-617-153505
40	124.2	30.4	473	27	US-09-684-016-153505
41	124.2	30.4	475	25	US-09-654-617-161426

42	124.2	30.4	475	27	US-09-684-016-161426	Sequence 161426,
43	124.2	30.4	804	25	US-09-654-617-121273	Sequence 121273,
44	124.2	30.4	804	27	US-09-684-016-121273	Sequence 121273,
45	124.2	30.4	97711	27	US-09-692-412-90	Sequence 90, Appl

ALIGNMENTS

```
RESULT 1
US-09-540-235-1
; Sequence 1, Application US/09540235
; GENERAL INFORMATION:
; APPLICANT: Fisher, Dane K.
; APPLICANT: Laljudi, Raghunath V.
; TITLE OF INVENTION: Nucleic Acid Sequences from Cyanidium caldarium and Uses
; TITLE OF INVENTION: thereof
; FILE REFERENCE: 38-21(15749)B
; CURRENT APPLICATION NUMBER: US/09/540,235
; PRIOR FILING DATE: 2000-04-03
; PRIOR APPLICATION NUMBER: 60/128,439
; PRIOR FILING DATE: 1999-04-06
; NUMBER OF SEQ ID NOS: 5674
; SEQ ID NO 1
; LENGTH: 408
; TYPE: DNA
; ORGANISM: Cyanidium caldarium
; OTHER INFORMATION: Clone ID: LIB190-001-Q1-E1-A12
US-09-540-235-1
```

Query Match 100.0%; Score 408; DB 21; Length 408;

Best Local Similarity 100.0%; Pred. No. 2.1e-113; Mismatches 0; Indels 0; Gaps 0;

Matches 408; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
QY 1 acgcccgtatgagaattacgagttgcttcgagctcgcgtgttggttcataatttc 60
    |||
Db 1 acgcccgtatgagaattacgagttgcttcgagctcgcgtgttggttcataatttc 60
QY 61 ttgtctgaaagcgtttgggctgttatcagtcgcataagatattccaaagtgtatcgt 120
    |||
Db 61 ttgtctgaaagcgtttgggctgttatcagtcgcataagatattccaaagtgtatcgt 120
QY 121 cgtctagaagaagcagaagaacatacttcaagcacactctctgtaacgaataac 180
    |||
Db 121 cgtctagaagaagcagaagaacatacttcaagcacactctctgtaacgaataac 180
QY 181 tcatgagtgacacctgttccaaaggaactacgtacgaataacacagcttcttaacta 240
    |||
Db 181 tcatgagtgacacctgttccaaaggaactacgtacgaataacacagcttcttaacta 240
QY 241 ttccgaaaagaagcagaagaatcatcatagttcgcggagcttcaaggttagaagaagaag 300
    |||
Db 241 ttccgaaaagaagcagaagaatcatcatagttcgcggagcttcaaggttagaagaagaag 300
QY 301 ttacaacggttatcgaagaagaatcatcatatcgcagaagatgaccagaagaagaag 360
    |||
Db 301 ttacaacggttatcgaagaagaatcatcatatcgcagaagatgaccagaagaagaag 360
QY 361 cgaatggaatgactgtactgttgggaatacatcatcatatgttgtta 408
    |||
Db 361 cgaatggaatgactgtactgttgggaatacatcatcatatgttgtta 408
```

```
RESULT 2
US-60-128-439-2
; Sequence 2, Application US/60128439
; GENERAL INFORMATION:
; APPLICANT: Fisher, Dane K.
; APPLICANT: Laljudi, Raghunath V.
; TITLE OF INVENTION: Nucleic Acid Sequences from Cyanidium caldarium and Uses
; TITLE OF INVENTION: thereof
; FILE REFERENCE: 38-21(15749)A
```

```
; CURRENT APPLICATION NUMBER: US/60/128,439
; CURRENT FILING DATE: 1999-04-06
; NUMBER OF SEQ ID NOS: 5661
; SEQ ID NO 2
; LENGTH: 408
; TYPE: DNA
; ORGANISM: Cyanidium caldarium
; FEATURE:
; OTHER INFORMATION: Clone ID: LIB190-001-Q1-E1-A12
US-60-128-439-2
```

Query Match 100.0%; Score 408; DB 45; Length 408;

Best Local Similarity 100.0%; Pred. No. 2.1e-113; Mismatches 0; Indels 0; Gaps 0;

Matches 408; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
QY 1 acgcccgtatgagaattacgagttgcttcgagctcgcgtgttggttcataatttc 60
    |||
Db 1 acgcccgtatgagaattacgagttgcttcgagctcgcgtgttggttcataatttc 60
QY 61 ttgtctgaaagcgtttgggctgttatcagtcgcataagatattccaaagtgtatcgt 120
    |||
Db 61 ttgtctgaaagcgtttgggctgttatcagtcgcataagatattccaaagtgtatcgt 120
QY 121 cgtctagaagaagcagaagaacatacttcaagcacactctctgtaacgaataac 180
    |||
Db 121 cgtctagaagaagcagaagaacatacttcaagcacactctctgtaacgaataac 180
QY 181 tcatgagtgacacctgttccaaaggaactacgtacgaataacacagcttcttaacta 240
    |||
Db 181 tcatgagtgacacctgttccaaaggaactacgtacgaataacacagcttcttaacta 240
QY 241 ttccgaaaagaagcagaagaatcatcatagttcgcggagcttcaaggttagaagaagaag 300
    |||
Db 241 ttccgaaaagaagcagaagaatcatcatagttcgcggagcttcaaggttagaagaagaag 300
QY 301 ttacaacggttatcgaagaagaatcatcatatcgcagaagatgaccagaagaagaag 360
    |||
Db 301 ttacaacggttatcgaagaagaatcatcatatcgcagaagatgaccagaagaagaag 360
QY 361 cgaatggaatgactgtactgttgggaatacatcatcatatgttgtta 408
    |||
Db 361 cgaatggaatgactgtactgttgggaatacatcatcatatgttgtta 408
```

```
RESULT 3
US-60-128-439-4188
; Sequence 4188, Application US/60128439
; GENERAL INFORMATION:
; APPLICANT: Fisher, Dane K.
; APPLICANT: Laljudi, Raghunath V.
; TITLE OF INVENTION: Nucleic Acid Sequences from Cyanidium caldarium and Uses
; TITLE OF INVENTION: thereof
; FILE REFERENCE: 38-21(15749)A
; CURRENT APPLICATION NUMBER: US/60/128,439
; CURRENT FILING DATE: 1999-04-06
; NUMBER OF SEQ ID NOS: 5661
; SEQ ID NO 4188
; LENGTH: 384
; TYPE: DNA
; ORGANISM: Cyanidium caldarium
; FEATURE:
; OTHER INFORMATION: Clone ID: LIB190-054-Q1-E1-D11
US-60-128-439-4188
```

Query Match 74.1%; Score 302.4; DB 45; Length 384;

Best Local Similarity 91.2%; Pred. No. 2.9e-81; Mismatches 31; Indels 0; Gaps 0;

Matches 321; Conservative 0; Mismatches 31; Indels 0; Gaps 0;

```
QY 57 attcttctgaaagcgtttgggctgttatcagtcgcataagatattccaaagtgtta 116
    |||
Db 1 attcttctgaaagcgtttgggctgttatcagtcgcataagatattccaaagtgtta 60
```



```
Db 32 attcgtgtagagcgaggaagcagtaagtaatgaccatgacattccaaagtttga 91
Qy 117 tctgtctaaagaagaacagagaacatcttcaagacatctctgtacagca 176
Db 92 tctgtctaaagaagaacagagaacatcttcaagacatctctgtacagca 151
Qy 177 attactatgtagcacttcttcaagaactatgtaagaataacaggttcttcta 236
Db 152 atactcagtagtgccttcttcaagaactatgtaagaataacaggttcttcta 211
Qy 237 cctatcgaagaagaagaactatcagttcgcgagcttccaaggtagaagaaga 296
Db 212 cctaagcagatcagaagaagaactatcagttcgcgagcttccaaggtagaaga 271
Qy 297 aaagttacaacgtgttatcagaagaataatcgataacatcagagagtgaccag 352
Db 272 ccagtcaccaagtgtagtcgaggaactatcgataacatcagagagtgaccag 327
```

```
RESULT 7
US-09-770-152-388
; Sequence 388, Application US/09770152
; GENERAL INFORMATION:
; APPLICANT: Gorlach, Jörn
; APPLICANT: An, Yong-Qiang
; APPLICANT: Hamilton, Carol M.
; APPLICANT: Price, Jennifer L.
; APPLICANT: Raines, Tracy M.
; APPLICANT: Yu, Yang
; APPLICANT: Rameaka, Joshua G.
; APPLICANT: Page, Amy
; APPLICANT: Matthew, Abraham V.
; APPLICANT: Ledford, Brooke L.
; APPLICANT: Woessner, Jeffrey P.
; APPLICANT: Haas, William David
; APPLICANT: Garcia, Carlos A.
; APPLICANT: Krieker, Maja
; APPLICANT: Slader, Ted
; APPLICANT: Davis, Keith R.
; APPLICANT: Allen, Keith
; APPLICANT: Hoffman, Neil
; APPLICANT: Hurban, Patrick
; TITLE OF INVENTION: Expressed Sequences of Arabidopsis
; FILE REFERENCE: 2025US (PARA-014PRV)
; CURRENT FILING DATE: 2001-01-26
; PRIOR APPLICATION NUMBER: 60/178,503
; NUMBER OF SEQ ID NOS: 999
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO: 388
; LENGTH: 562
; TYPE: DNA
; ORGANISM: Arabidopsis thaliana
US-09-770-152-388
```

```
Query Match 32.6%; Score 133.2; DB 30; Length 562;
Best Local Similarity 63.4%; Pred. No. 1.1e-29;
Matches 204; Conservative 0; Mismatches 118; Indels 0; Gaps 0;
```

```
Qy 177 tcaagtcagatgaagattccaaagtgtatcgtctgtagaagaagaagca 146
Db 29 tcggcgagcagtagaagttcaatccgcgtgtgacctcttcgcgcgaagaacaggaagct 88
Qy 147 tacttcaagcagacatctctgtacagcaataactatgtagcacccttgcagaaga 206
Db 89 caacttaacgtctccttcaagcgtgtgagcggttctatgagctgcgcgttcaagaagc 148
Qy 207 ctacgtacgaataacagcgttctgttcttactatcgaaaagaagaagtaatacata 266
```

```
Db 149 ctccgtacaacatatacaacgtagatccatgcccatttcgttaagaagcagagtgcaagtt 208
Qy 267 gtccgcgagcttccaaggttagagaagaagaagttacaacagtgtagtaagaagaatat 326
Db 209 gtctgtgagcgttccaaggaagaagaagtgtagtcaaggttagtaccgcgaagttg 268
Qy 327 cagatatactcagagagtagcaccagaagaagaagaagcgaatggaatgtagttagctgtgga 386
Db 269 gtgatttaacttcagagagaacacacaagggagaagaagttcaacgcaacaggttcaagctcga 328
Qy 387 ataatcactatcattgttga 408
Db 329 gtcaatgcttcgaattgtatga 350
```

```
RESULT 8
US-09-605-701-18273
; Sequence 18273, Application US/09605701
; GENERAL INFORMATION:
; APPLICANT: Havukkala, Ilkka
; APPLICANT: Shenk, Michael A.
; TITLE OF INVENTION: Polynucleotides, Material Incorporated
; FILE REFERENCE: 11000.104103
; CURRENT FILING DATE: 2000-06-21
; NUMBER OF SEQ ID NOS: 25120
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO: 18273
; LENGTH: 371
; TYPE: DNA
; ORGANISM: Pinus radiata
US-09-605-701-18273
```

```
Query Match 32.5%; Score 132.8; DB 23; Length 371;
Best Local Similarity 63.4%; Pred. No. 1.3e-29;
Matches 203; Conservative 0; Mismatches 117; Indels 0; Gaps 0;
```

```
Qy 88 cagtcgcagatgaagattccaaagtgtatcgtctgtagaagaagaagcagagcaat 147
Db 3 catcagagtagaagttacaatccaaagagtcaggttccaggaagaagcagcaagcagc 62
Qy 148 acttcaagcagcacttctgtacgacgaataactatgtagtgaacctgttccaagaac 207
Db 63 attcaactgcccactagtggtgcgcgtattttagtagtgccacctgtctctgatt 122
Qy 208 taagtacgaataacagcgttcttactatcttgaagaagaagaagcaagtaatacag 267
Db 123 tgagaacaagtagcagtagtcttgcagatccgattagaagaagtagtagtcaagttg 182
Qy 268 ttccgagcgttccaaggttagagaagaagaagttacaacgtgttatacgaagaataatc 327
Db 183 tagcagagacatttaaggttagagaagaagcaaggtgttccaagttatcgaagaatg 242
Qy 328 gatacatatcagagagtagcaccagaagaagaagaagcgaatgtagttagttagtggaa 387
Db 243 tcaatacagttgagcagcattactctgtgagaagtaagtagcaacatcgtgaatgtgtg 302
Qy 388 tacatcactatcattgtt 407
Db 303 tcaaccatccaaggtcgtt 322
```

```
RESULT 9
US-09-411-999-36936
; Sequence 36936, Application US/09411999
; GENERAL INFORMATION:
; APPLICANT: Havukkala, Ilkka
; APPLICANT: Shenk, Michael Andrew
; TITLE OF INVENTION: Polynucleotides Isolated from plants and
; FILE REFERENCE: 10230
```

```

; CURRENT APPLICATION NUMBER: US/09/411,999
; CURRENT FILING DATE: 1999-10-04
; NUMBER OF SEQ ID NOS: 37897
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 36936
; LENGTH: 384
; TYPE: DNA
; ORGANISM: Pinus radiata
US-09-411-999-36936
```

```

Query Match          32.5%; Score 132.8; DB 18; Length 384;
Best Local Similarity 63.4%; Pred. NO. 1.3e-29;
Matches 203; Conservative 0; Mismatches 117; Indels 0; Gaps 0;
```

```

QY 88 cagtcgcacatgaagattcccaagtgtatcgtctctagaagaagcagaagaacat 147
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 44 caticagatgaatcaatcccaagatcagcagttccaggaagaagccgcaagcac 103
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 148 acttcaagcaccatctctctgacagcaatcatgacgtgaccctgtcccaaggac 207
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 104 attcactgcccccatcgtgtgctggtgatttgatgagtgaccactgtcctctgatt 163
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 208 tacgtacgaagaatacagcgctgtcttcttactctgaagaagaagcaagtaatacag 267
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 164 tgaagaacaagatcaatgtctgctcgtatccgattagaagaagatgatagtcagtcg 223
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 268 ttgcgcgagccttccaggtagaagaagaagttacaaactgttatcgaaagaatc 327
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 224 tacgaggaacatttaagggtagaagaagttgtccaaatttactgaagaagaattgg 283
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 328 ggatacatatcgagagatgacagagaagaagaagcaatggaactgtactgtggaa 387
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 284 tcatacatgttgagcgacttactcgttgagaaagtcacacactgtgaattgtgtg 343
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 388 tacatccatcattgttgt 407
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 344 tccaccatcccaagtcgt 363
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
```

```

RESULT 10
US-09-605-701-5338
; Sequence 5338, Application US/09605701
; GENERAL INFORMATION:
; APPLICANT: Havukkala, Ilkka
; APPLICANT: Shenk, Michael A.
; TITLE OF INVENTION: Polynucleotides, Materials Incorporated
; FILE REFERENCE: 11000.104103
; CURRENT APPLICATION NUMBER: US/09/605,701
; CURRENT FILING DATE: 2000-06-21
; NUMBER OF SEQ ID NOS: 25120
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 5338
; LENGTH: 394
; TYPE: DNA
; ORGANISM: Pinus radiata
US-09-605-701-5338
```

```

Query Match          32.5%; Score 132.8; DB 23; Length 394;
Best Local Similarity 63.4%; Pred. NO. 1.3e-29;
Matches 203; Conservative 0; Mismatches 117; Indels 0; Gaps 0;
```

```

QY 88 cagtcgcacatgaagattcccaagtgtatcgtctctagaagaagcagaagaacat 147
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 53 caticagatgaatcaatcccaagatcagcagttccaggaagaagccgcaagcac 112
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 148 acttcaagcaccatctctgacagcaatcatgacgtgaccctgtcccaaggac 207
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 113 attcactgcccccatcgtgtgctggtgatttgatgagtgaccactgtcctctgatt 172
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 208 tacgtacgaagaatacagcgctgtcttcttactcttgaaagaagaagtaatacag 267
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
```

```

DB 173 tgagaacaagtaacaatgttctgtccatccgattagaagaagatgaagattcaagttgg 232
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 268 ttgcgcgagccttcaaggtagaagaagaagttacaacglttatcgaaagaatc 327
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 233 tacgaggaacatttaagggtagaagaagaagttgtccaaatttactgaagaagaattgg 292
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 328 ggatacatatcgagagatgacagagaagaagaagcaatggaactgtactgtctgtggaa 387
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 293 tcatacatgttgagcgacttactcgttgagaaagtcacacactgtgaattgtgtg 352
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 388 tacatccatcattgttgt 407
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 353 tccaccatcccaagtcgt 372
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
```

```

RESULT 11
US-09-605-699-11618
; Sequence 11618, Application US/09605699
; GENERAL INFORMATION:
; APPLICANT: Havukkala, Ilkka
; APPLICANT: Shenk, Michael A.
; TITLE OF INVENTION: Polynucleotides, Materials Incorporated
; FILE REFERENCE: 11000.104102
; CURRENT APPLICATION NUMBER: US/09/605,699
; CURRENT FILING DATE: 2000-06-21
; NUMBER OF SEQ ID NOS: 25120
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 11618
; LENGTH: 429
; TYPE: DNA
; ORGANISM: Pinus radiata
US-09-605-699-11618
```

```

Query Match          32.5%; Score 132.8; DB 23; Length 429;
Best Local Similarity 63.4%; Pred. NO. 1.3e-29;
Matches 203; Conservative 0; Mismatches 117; Indels 0; Gaps 0;
```

```

QY 88 cagtcgcacatgaagattcccaagtgtatcgtctctagaagaagcagaagaacat 147
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 53 caticagatgaatcaatcccaagatcagcagttccaggaagaagccgcaagcac 112
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 148 acttcaagcaccatctctgacagcaatcatgacgtgaccctgtcccaaggac 207
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 113 attcactgcccccatcagtggtgctgtatttgatgagtgaccactgtcctctgatt 172
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 208 tacgtacgaatacagcgctgtcttcttactcttgaaagaagaagtaatacag 267
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 173 tgagaacaagtaacaatgttctgtccatccgattagaagaagatgaagttcaagttg 232
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 268 ttgcgcgagccttcaaggtagaagaagaagttacaacglttatcgaaagaatc 327
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 233 tacgaggaacatttaagggtagaagaagttgtccaaatttactgaagaagaattgg 292
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 328 ggatacatatcgagagatgacagagaagaagaagcaatggaactgtactgtctgtggaa 387
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 293 tcatacatgttgagcgacttactcgttgagaaagtcacacactgtgaattgtgtg 352
   ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
QY 388 tacatccatcattgttgt 407
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 353 tccaccatcccaagtcgt 372
   ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
```

```

RESULT 12
US-09-605-701-4652
; Sequence 4652, Application US/09605701
; GENERAL INFORMATION:
; APPLICANT: Havukkala, Ilkka
; APPLICANT: Shenk, Michael A.
; TITLE OF INVENTION: Polynucleotides, Materials Incorporated
; FILE REFERENCE: 11000.104103
; CURRENT APPLICATION NUMBER: US/09/605,701
; CURRENT FILING DATE: 2000-06-21
; NUMBER OF SEQ ID NOS: 25120
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 4652
; LENGTH: 394
; TYPE: DNA
; ORGANISM: Pinus radiata
US-09-605-701-4652
```

```
FILE REFERENCE: 11000.1041U3
; CURRENT APPLICATION NUMBER: US/09/605.701
; NUMBER OF SEQ ID NOS: 25120
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 4652
; LENGTH: 471
; TYPE: DNA
; ORGANISM: Pinus radiata
US-09-605-701-4652
```

```
Query Match          32.5%: Score 132.8; DB 23; Length 471;
Best Local Similarity 63.4%: Pred. No. 1.4e-29;
Matches 203; Conservative 0; Mismatches 117; Indels 0; Gaps 0;
```

```
QY 88 cagtcgcataagattccaaagtgtatcgtctagtagaagaagcagaagcat 147
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 78 catcagagatgaagtaacatccaaagatcagcagttccaggaagaagccgcaagcac 137
QY 148 acttcaagaccacatctctctgtaagcagaatactatgagtcacccctgtccaaagcac 207
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 138 attcaccgcccccatctagttgcgcgtattttagatgagtcacaccctgtcctctgatt 197
QY 208 tacgtaagaaatacagcgtctctcttaccattcgaagaagaagcaatcatcatag 267
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 198 tgagaacaacagacaatgtctcttcgattcgcattagaagaagatgataagttcagtg 257
QY 268 ttccgcgcgtcttcaagggttagaagaagaattacaacgltgtatcgaagaataatc 327
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 258 tacgaggaacatttaagggttagaagaagaattgtccaaagttatccagaagaatgg 317
QY 328 gatacatatcgagagatgagcagagaagaagaagcgaatgagcttactctgaggaa 387
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 318 tcatacatgttggagcactactcgttgagaaagtcataagcacactgtgaatgttg 377
QY 388 tacatccatctaattgtgt 407
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 378 tccaccatccaaagtcgt 397
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
```

```
RESULT 13
US-09-606-755-8558
; Sequence 8558, Application US/09606755
; GENERAL INFORMATION:
; APPLICANT: Havukkala, Ilkka
; APPLICANT: Shenk, Michael A.
; TITLE OF INVENTION: Polynucleotides, Materials Incorporating
; FILE REFERENCE: 11000.1041U6
; CURRENT APPLICATION NUMBER: US/09/606.755
; CURRENT FILING DATE: 2000-06-22
; NUMBER OF SEQ ID NOS: 17747
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 8558
; LENGTH: 497
; TYPE: DNA
; ORGANISM: Pinus radiata
US-09-606-755-8558
```

```
Query Match          32.5%: Score 132.8; DB 23; Length 497;
Best Local Similarity 63.4%: Pred. No. 1.4e-29;
Matches 203; Conservative 0; Mismatches 117; Indels 0; Gaps 0;
```

```
QY 88 cagtcgcataagattccaaagtgtatcgtctagtagaagaagcagaagaagcat 147
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 26 catcagagatgaagtaacatccaaagatcagcagttccaggaagaagccgcaagcac 85
QY 148 acttcaagaccacatctctctgtaagcagaatactatgagtcacccctgtccaaagcac 207
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 86 attcaccgcccccatctagttgcgcgtattttagatgagtcacacactgtcctctgatt 145
```

```
QY 208 tacgtacgaataacagcgtctcttcttactatctcgaagaagaagcaagtaatcatag 267
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 146 tggagaacaacagtaacatgtctctgtcttccttagaagaagatgagttcaggtg 205
QY 268 ttccgcgcgtcttcaagggttagaagaagaattacaacgltgtatcgaagaataatc 327
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 206 tacgaggaacatttaagggttagaagaagaattgtccaaagttatcgaagaagaatgg 265
QY 328 gatacatatcgagagatgagcagagaagaagaagcgaatgagactgtactgttggaa 387
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 266 tcatacatgttggagcactactcgttgagaaagtcataagtcacacactgtgaatgttg 325
QY 388 tacatccatctaattgtgt 407
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 326 tccaccatccaaagtcgt 345
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
```

```
RESULT 14
US-09-411-999-32416
; Sequence 32416, Application US/09411999
; GENERAL INFORMATION:
; APPLICANT: Havukkala, Ilkka
; APPLICANT: Shenk, Michael Andrew
; TITLE OF INVENTION: Polynucleotides isolated from plants and
; FILE REFERENCE: 1023U
; CURRENT APPLICATION NUMBER: US/09/411.999
; CURRENT FILING DATE: 1999-10-04
; NUMBER OF SEQ ID NOS: 37897
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 32416
; LENGTH: 543
; TYPE: DNA
; ORGANISM: Pinus radiata
US-09-411-999-32416
```

```
Query Match          32.5%: Score 132.8; DB 18; Length 543;
Best Local Similarity 63.4%: Pred. No. 1.4e-29;
Matches 203; Conservative 0; Mismatches 117; Indels 0; Gaps 0;
```

```
QY 88 cagtcgcataagattccaaagtgtatcgtctagtagaagaagcagaagaagcat 147
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 71 catcagagatgaagtaacatccaaagatcagcagttccaggaagaagccgcaagcac 130
QY 148 acttcaagaccacatctctctgtaagcagaatactatgagtcacccctgtccaaagcac 207
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 131 attcaccgcccccatctagttgcgcgtattttagatgagtcacaccctgtcctctgatt 190
QY 208 tacgtaagaaatacagcgtctcttcttactatctcgaagaagaagaagtaatcatag 267
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 191 tgagaacaacagtaacatgtctcttcgattccgattagaagaagatgagaaagttcagtg 250
QY 268 ttccgcgcgtcttcaagggttagaagaagaattacaacgltgtatcgaagaataatc 327
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 251 tacgaggaacatttaagggttagaagaagaattgtccaaagttatccgaagaagaatgg 310
QY 328 gatacatatcgagagatgagcagagaagaagaagcgaatgagactgtactgttggaa 387
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 311 tcatacatgttggagcactactcgttgagaaagtcataagtcacacactgtgaatgttg 370
QY 388 tacatccatctaattgtgt 407
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 371 tccaccatccaaagtcgt 390
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
```

```
RESULT 15
US-09-605-701-17385
; Sequence 17385, Application US/09605701
; GENERAL INFORMATION:
; APPLICANT: Havukkala, Ilkka
; APPLICANT: Shenk, Michael A.
; TITLE OF INVENTION: Polynucleotides, Material Incorporated
```

```

; TITLE OF INVENTION: Them, and Methods for Using Them
; FILE REFERENCE: 11000.1041U3
; CURRENT APPLICATION NUMBER: US/09/605,701
; CURRENT FILING DATE: 2000-06-21
; NUMBER OF SEQ ID NOS: 25120
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 17385
; LENGTH: 555
; TYPE: DNA
; ORGANISM: Pinus radiata
US-09-605-701-17385

```

```

Query Match      32.5%; Score 132.8; DB 23; Length 555;
Best Local Similarity 63.4%; Pred No.1.5e-29;
Matches 203; Conservative 0; Mismatches 117; Indels 0; Gaps 0;

QY 88 cagtcgcacatgaagatcccaagtgtatcgtctgtagaagaagcagagaagcat 147
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 69 catcagatgaagtacatccaagtcagcaggttcagagaagaagcagcagcagc 128

QY 148 acttcaagcacatctctgtacagcgaatactcatgtcagccctgtccaaggac 207
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 129 attcaatgcccatctagtgcgcgatatttgatgagtgacacactgtcctctgatt 188

QY 208 tacgtacgaatacagcgtctcttcttaccattcgaagaagaagcgaatcatcag 267
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 189 tgagaacaagtaacatgtctgtcgtatccgattcgaagaagatgataagttcaggtcg 248

QY 268 ttcgagagcttcaagggtagagaagaagaagttacaacgtgtatcgaagaataatc 327
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 249 tacgaagaacatttaagggtagagaaggcaaggtgtccaagttatcgaagaagaattgg 308

QY 328 ggaatacatcgaagagagaccagagaagaagaagcgaatggaatgactgtgggaa 387
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 309 tcatacatgttagcgcattactcgttgagaagaagttcaatgacacactgtgaattgtgtg 368

QY 388 tacatccatctaatgttgtt 407
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 369 tccaccatccaaggtcgtt 388

```

Search completed: March 2, 2002, 23:02:24
Job time: 9208 sec

